WEST Search History

DATE: Wednesday, January 29, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L12	chlamydia and L2	20	L12
L11	papilloma and L2	29	L11
L10	Treponenma and L2	0	L10
L9	Gonoccal and L2	0	L9
L8	HSV and L2	31	L8
L7	L3	38	L7
L6	L5	17	L6
DB=USPT,PGPB,JPAB,EPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L5	HIV and L4	124	L5
L4	immunogen and L3	131	L4
L3	congenital and L2	162	L3
L2	quadriceps and injection	471	L2
L1	quadriceps adj injection	0	L1

END OF SEARCH HISTORY

```
=> " sextial transmitted diseaase"
             0 "SEXTIAL"
         30795 "TRANSMITTED"
             1 "DISEAASE"
L1           0 " SEXTIAL TRANSMITTED DISEAASE"
                 ("SEXTIAL"(W)"TRANSMITTED"(W)"DISEAASE")

=> mucosal (w) immunity
         29992 MUCOSAL
             5 MUCOSALS
         29994 MUCOSAL
                 (MUCOSAL OR MUCOSALS)
         61201 IMMUNITY
            93 IMMUNITIES
         61230 IMMUNITY
                 (IMMUNITY OR IMMUNITIES)
L2         921 MUCOSAL (W) IMMUNITY

=> systamic (w) immunity
             0 SYSTAMIC
         61201 IMMUNITY
            93 IMMUNITIES
         61230 IMMUNITY
                 (IMMUNITY OR IMMUNITIES)
L3           0 SYSTAMIC (W) IMMUNITY

=> humoral (w) immuneresponse
         19192 HUMORAL
             5 IMMUNERESPONSE
L4           0 HUMORAL (W) IMMUNERESPONSE

=> "humoral immune response"
         19192 "HUMORAL"
        144306 "IMMUNE"
             7 "IMMUNES"
        144308 "IMMUNE"
                 ("IMMUNE" OR "IMMUNES")
       1341951 "RESPONSE"
        260418 "RESPONSES"
       1460508 "RESPONSE"
                 ("RESPONSE" OR "RESPONSES")
L5        3791 "HUMORAL IMMUNE RESPONSE"
                 ("HUMORAL"(W)"IMMUNE"(W)"RESPONSE")

=> L2 and L5
L6          25 L2 AND L5

=> muscular (w) injection
         20640 MUSCULAR
        406750 INJECTION
         92362 INJECTIONS
        463466 INJECTION
                 (INJECTION OR INJECTIONS)
L7          83 MUSCULAR (W) INJECTION

=> L6 and L7
L8           0 L6 AND L7
```

=> DIS L6 1- IBIB ABS
YOU HAVE REQUESTED DATA FROM 25 ANSWERS - CONTINUE? Y/(N):Y
THE ESTIMATED COST FOR THIS REQUEST IS 60.38 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L6 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:926602 CAPLUS
DOCUMENT NUMBER: 138:13473
TITLE: GM-CSF transgene-based adjuvant allows the establishment of protective **mucosal immunity** following vaccination with inactivated Chlamydia trachomatis
AUTHOR(S): Lu, Hang; Xing, Zhou; Brunham, Robert C.
CORPORATE SOURCE: British Columbia Center for Disease Control, University of British Columbia, Vancouver, BC, Can.
SOURCE: Journal of Immunology (2002), 169(11), 6324-6331
CODEN: JOIMA3; ISSN: 0022-1767
PUBLISHER: American Association of Immunologists
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cellular and **humoral immune responses** induced following murine Chlamydia trachomatis infection confer almost sterile protection against homologous reinfection. On the other hand, immunization with inactivated organism induces little protective immunity in this model system. The underlying mechanism(s) that dets. such divergent outcome remains unclear, but elucidating the mechanism will probably be important for chlamydial vaccine development. One of the distinct differences between the two forms of immunization is that chlamydia replication in epithelial cells causes the secretion of a variety of proinflammatory cytokines and chemokines, such as GM-CSF, that may mobilize and mature dendritic cells and thereby enhance the induction of protective immunity. Using a murine model of C. trachomatis mouse pneumonitis lung infection and intrapulmonary adenoviral GM-CSF transfection, we demonstrate that the expression of GM-CSF in the airway compartment significantly enhanced systemic Th1 cellular and local IgA immune responses following immunization with inactivated organisms. Importantly, immunized mice had significantly reduced growth of chlamydia and exhibited less severe pulmonary inflammation following challenge infection. The site of GM-CSF transfection proved important, since mice immunized with inactivated organisms after GM-CSF gene transfer by the i.p. route exhibited little protection against pulmonary challenge, although i.p. immunization generated significant levels of systemic Th1 immune responses. The obvious difference between i.p. and intrapulmonary immunization was the absence of lung IgA responses following i.p. vaccination. In aggregate, the findings demonstrate that the local cytokine environment is crit. to the induction of protective immunity following chlamydial vaccination and that GM-CSF may be a useful adjuvant for a chlamydial vaccine.
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:547693 CAPLUS
DOCUMENT NUMBER: 138:37726
TITLE: Helicobacter pylori-specific immunoglobulin synthesis in gnotobiotic piglets: evidence for the induction of **mucosal immunity** in the stomach
AUTHOR(S): Krakowka, Steven; Eaton, K. A.

CORPORATE SOURCE: College of Veterinary Medicine, Department of Veterinary Biosciences, The Ohio State University, Columbus, OH, 43210, USA
SOURCE: Veterinary Immunology and Immunopathology (2002), 88(3-4), 173-182
CODEN: VIIMDS; ISSN: 0165-2427
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Short term tissue biopsy cultures and paired, sera, bile and gastric and intestinal contents from Helicobacter pylori-infected gnotobiotic piglets were tested for the synthesis of H. pylori-specific Ig isotype prodn. by antigen-specific ELISA from post-infection days (PIDs) 2-28. Serum antibody levels in all three Ig isotypes were elevated from baseline values by PID 14, serum IgM levels reached peak levels on PID 14 and by PID 28 bile was strongly pos. for IgA and IgG. Intestinal, but not gastric contents from infected piglets, contained IgA-specific antibody from PID 14 onward. Gastric mucosal epithelia adjacent to areas of inflammation in infected but not uninfected control piglets produced readily detectable amts. of porcine secretory component (SC); IgA-pos. plasma cells were identified in gastric submucosa and lamina propria in these areas. Culture fluid supernatants, collected from explanted gastric cardia and antra and intestinal ilea of H. pylori-infected piglets had trace amts. of IgA as early as PID 2 in some animals, and strong IgA reactivity in all by PID 28. Supernatants also contained H. pylori-specific IgG by PID 14. A strong gastric lymph node IgA response contrasted with moderate IgA prodn. in mesenteric lymph nodes and spleen. Mucosal biopsy prodn. of H. pylori-specific IgG was more evenly distributed throughout the lymphoid system. These data support the contention that the Ig response to H. pylori is initiated within the gastric compartment and matures over time to a generalized IgA-dominated mucosal and IgG-dominated nonmucosal **humoral immune response**.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:440655 CAPLUS
DOCUMENT NUMBER: 137:383382
TITLE: Immune responses to viruses
AUTHOR(S): Yewdell, Jonathan W.; Bennink, Jack R.
CORPORATE SOURCE: Laboratory of Viral Diseases, National Institute of Allergy and Infectious Diseases, Bethesda, MD, 20892-0440, USA
SOURCE: Clinical Virology (2nd Edition) (2002), 273-309.
Editor(s): Richman, Douglas D.; Whitley, Richard J.; Hayden, Frederick G. ASM Press: Herndon, Va.
CODEN: 69CSD2; ISBN: 1-55581-226-0
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English

AB A review describes the mechanisms involved in the typical immune response to a virus. It presents an overview of the immune system, and discusses the innate and **mucosal immunity**, specific effector mechanisms, pediatric immunity to viruses, viral interference with host immunity, and immunopathol.

REFERENCE COUNT: 261 THERE ARE 261 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L6 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:303042 CAPLUS
DOCUMENT NUMBER: 137:277421
TITLE: The induction of systemic and **mucosal immunity** to protein vaccines delivered through skin sites exposed to UVB
AUTHOR(S): Enioutina, Elena Y.; Visic, Dino M.; Daynes, Raymond A.
CORPORATE SOURCE: Department of Pathology, University of Utah, Salt Lake City, UT, 84132-2501, USA
SOURCE: Vaccine (2002), 20(16), 2116-2130
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB It has been reported that common **mucosal immunity** can be efficiently induced in mice following immunization through the skin with vaccine formulations contg. either the active form of vitamin D, or chem. agents capable of locally enhancing cAMP levels. Herein, we report that exposure of skin to UV radiation B (UVB) can be employed as a means to alter systemic **humoral immune responses** and to promote the induction of **mucosal immunity** to protein antigens delivered into UVB-exposed skin sites. Our data indicates that the skin, as a vaccination site, can be manipulated to allow efficient induction of common mucosal and systemic immune responses.
REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:173508 CAPLUS
DOCUMENT NUMBER: 136:323630
TITLE: Chimeric Recombinant Hepatitis E Virus-like Particles as an Oral Vaccine Vehicle Presenting Foreign Epitopes
AUTHOR(S): Niikura, Masahiro; Takamura, Shiki; Kim, Gisen; Kawai, Satoru; Saijo, Masayuki; Morikawa, Shigeru; Kurane, Ichiro; Li, Tian-Cheng; Takeda, Naokazu; Yasutomi, Yasuhiro
CORPORATE SOURCE: Department of Virology 1, National Institute of Infectious Diseases, Musashimurayama, Tokyo, Japan
SOURCE: Virology (2002), 293(2), 273-280
CODEN: VIRLAX; ISSN: 0042-6822
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Many viral and bacterial pathogens establish infections through mucosal surfaces in their initial stage. However, only a few nonreplicating mols. successfully induce strong mucosal immune reaction without the addn. of adjuvants by oral administration. To overcome this difficulty, the authors investigated whether hepatitis E virus-like particles (HEV-VLPs) could be utilized as a carrier mol. for foreign antigenic epitopes and to stimulate **mucosal immunity** without the need for

adjuvants. To accomplish this goal, the authors incorporated a B cell epitope tag, consisting of 11 amino acids at the C-terminal of HEV-VLP. The chimeric VLP showed morphol. similar to that of the mature HEV virion and VLP. The inserted epitope was reactive with a specific monoclonal antibody in the VLP form, suggesting that it was exposed on the surface of the VLP. After oral administration without adjuvant, this chimeric HEV induced significant levels of specific IgG and IgA to both the inserted epitope and HEV-VLP in intestinal secretions. These **humoral immune responses** were obsd. as early as 2 wk after the first immunization. These results suggest the potential of HEV-VLP as a mucosal vaccine carrier vehicle for the presentation of antigenic epitopes through oral administration. (c) 2002 Academic Press.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:884276 CAPLUS
DOCUMENT NUMBER: 137:31745
TITLE: CpG DNA functions as an effective adjuvant for the induction of immune responses in aged mice
AUTHOR(S): Manning, B. M.; Enioutina, E. Y.; Visic, D. M.; Knudson, A. D.; Daynes, R. A.
CORPORATE SOURCE: Department of Pathology, University of Utah, Salt Lake City, UT, 84132, USA
SOURCE: Experimental Gerontology (2001), 37(1), 107-126
CODEN: EXGEAB; ISSN: 0531-5565
PUBLISHER: Elsevier Science Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The present studies demonstrate that the immunization of aged mice with diphtheria toxoid in formulations contg. unmethylated immunostimulatory CpG motifs, promotes the successful development of immune responses that are qual. and quant. comparable to those induced in young animals vaccinated in a similar manner. Aged mice given vaccines contg. CpG oligodeoxynucleotides (ODNs) expressed primary and secondary systemic **humoral immune responses** having isotype profiles consistent with an enhancement in Th1 type immunity. The ability to generate common **mucosal immunity** was also restored in aged animals given CpG ODN-contg. vaccines. Dendritic cells (DCs) were detd. to represent one of the cellular targets of CpG ODN activities in aged mice since restoration of immune function was obsd. when DCs from aged donors were pulsed with antigen and CpG ODNs, prior to injection into syngeneic young adult or aged recipients. Interestingly, antigen-pulsed DCs from young donors were fully capable of stimulating immune responses following their injection into syngeneic young adult or aged hosts, without a need for exposure to CpG ODNs. Although the mechanism(s) by which CpG DNA exerts its beneficial adjuvant effects on the aged immune system remains unclear, the findings suggest that the incorporation of CpG ODNs into vaccine formulations provided to the aged could prove useful in the development of more effective vaccines for the elderly.

REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:841217 CAPLUS
DOCUMENT NUMBER: 136:400337
TITLE: Induction of **mucosal immunity** to mycobacterial heat shock protein (hsp) 65 by colonic inoculation of plasmid DNA encoding hsp65
AUTHOR(S): Orikasa, Hiroshi; Sato, Yukio; Yoshioka, Ryoji; Saito, Ayako; Irisawa, Atsushi; Saka, Mitsuru; Miyata, Masayuki; Obara, Katsutoshi; Kusukawa, Reiji
CORPORATE SOURCE: Dep. Internal Med. II, Fukushima Med. Univ. Sch. Med., Japan
SOURCE: Nippon Shokakibyo Gakkai Zasshi (2001), 98(9), 1048-1059
CODEN: NIPAA4; ISSN: 0446-6586
PUBLISHER: Nippon Shokakibyo Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB Mycobacterial heat shock protein (hsp) 65 has more than 50% sequence homol. with human hsp60 and immune responses against mycobacterial hsp65 may cross-react with human hsp60 and could cause autoimmune diseases including inflammatory bowel diseases (IBD). Since the colonic mucosa is a main inflammatory site in IBD, **mucosal immunity** to hsp65 may be more important for the mucosal inflammation than systemic immunity to hsp65. We inoculated plasmid DNA (pDNA) encoding mycobacterial hsp65 (pACB-hsp 65) into the colon of Wistar rats and evaluated the mucosal **humoral immune response** and the effect of these immune responses on the colonic mucosa. Four weeks after pDNA inoculation, significantly elevated titers of hsp65-specific IgA antibody were seen in fecal exts. of rats immunized intra-colonic mucosa with pACB-hsp65 (40.+-.9U/mL), whereas the fecal IgA antibody titers of rats inoculated intradermal with pACB-hsp65 did not arise (8.+-.5U/mL). Colonic inoculation of pACB-hsp65 induced systemic and mucosal immune responses to hsp65. However, macroscopic and histol. examns. of the colonic mucosa inoculated with pACB-hsp65 showed no evidence of mucosal damage. These results suggested that the **mucosal immunity** to hsp65 on the colonic mucosa may not play a crucial role in the induction of colonic mucosal inflammation as was seen in IBD.

L6 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:388098 CAPLUS
DOCUMENT NUMBER: 136:68274
TITLE: Host determinants in HIV infection and disease. Part 1: Cellular and **humoral immune responses**
AUTHOR(S): Hogan, Christine M.; Hammer, Scott M.
CORPORATE SOURCE: College of Physicians and Surgeons, Columbia University, New York, NY, USA
SOURCE: Annals of Internal Medicine (2001), 134(9, Pt. 1), 761-776
CODEN: AIMEAS; ISSN: 0003-4819
PUBLISHER: American College of Physicians-American Society of Internal Medicine
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. The course of HIV infection varies widely among individuals. Long-term nonprogressors or slow progressors may remain asymptomatic and have normal CD4 counts despite more than a decade of untreated HIV infection. In contrast, rapid progressors develop AIDS within 5 yr. In addn., some persons remain uninfected despite repeated exposure to HIV. Immunol. and genetic studies of long-term nonprogressors and exposed yet uninfected persons, as well as data from studies of primary HIV infection, have helped to elucidate the mechanisms by which some persons are protected from HIV acquisition or have slow rates of disease progression. This review (the first of two parts) describes what is currently known about host factors in HIV-1 infection. Studies for inclusion were identified by a systematic search of PubMed for English-language literature published from 1988 through June 2000. Abstrs. of presentations at major meetings convened in 2000 were also included if appropriate. Growing evidence suggests a crucial role of cytotoxic T cells and T-helper cells in controlling viremia, slowing disease progression, and perhaps preventing establishment of infection. Humoral and **mucosal immunity**, sol. inhibitory factors, the cytokine milieu, and concomitant infections also affect outcome. Genetic host factors, such as inheritance of mutant chemokine receptors or certain HLA types, affect susceptibility to infection and subsequent clin. course. The role of cellular and humoral immunity, **mucosal immunity**, and other local factors in detg. the course of HIV infection is discussed.

REFERENCE COUNT: 188 THERE ARE 188 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:27173 CAPLUS

DOCUMENT NUMBER: 134:157635

TITLE: The sympathetic nerve-an integrative interface between two supersystems: The brain and the immune system

AUTHOR(S): Elenkov, Ilia J.; Wilder, Ronald L.; Chrousos, George P.; Vizi, E. Sylvester

CORPORATE SOURCE: Inflammatory Joint Diseases Section, Arthritis and Rheumatism Branch, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Bethesda, MD, USA

SOURCE: Pharmacological Reviews (2000), 52(4), 595-638
CODEN: PAREAQ; ISSN: 0031-6997

PUBLISHER: American Society for Pharmacology and Experimental Therapeutics

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 445 refs. The brain and the immune system are the two major adaptive systems of the body. During an immune response the brain and the immune system "talk to each other" and this process is essential for maintaining homeostasis. Two major pathway systems are involved in this cross-talk: the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system (SNS). This overview focuses on the role of SNS in neuroimmune interactions, an area that has received much less

attention than the role of HPA axis. Evidence accumulated over the last 20 yr suggests that norepinephrine (NE) fulfills the criteria for neurotransmitter/neuromodulator in lymphoid organs. Thus, primary and secondary lymphoid organs receive extensive sympathetic/noradrenergic innervation. Under stimulation, NE is released from the sympathetic nerve terminals in these organs, and the target immune cells express adrenoreceptors. Through stimulation of these receptors, locally released NE, or circulating catecholamines such as epinephrine, affect lymphocyte traffic, circulation, and proliferation, and modulate cytokine prodn. and the functional activity of different lymphoid cells. Although there exists substantial sympathetic innervation in the bone marrow, and particularly in the thymus and mucosal tissues, our knowledge about the effect of the sympathetic neural input on hematopoiesis, thymocyte development, and **mucosal immunity** is extremely modest. In addn., recent evidence is discussed that NE and epinephrine, through stimulation of the .beta.2-adrenoreceptor-cAMP-protein kinase A pathway, inhibit the prodn. of type 1/proinflammatory cytokines, such as interleukin (IL-12), tumor necrosis factor-.alpha., and interferon-.gamma. by antigen-presenting cells and T helper (Th) 1 cells, whereas they stimulate the prodn. of type 2/anti-inflammatory cytokines such as IL-10 and transforming growth factor-.beta.. Through this mechanism, systemically, endogenous catecholamines may cause a selective suppression of Th1 responses and cellular immunity, and a Th2 shift toward dominance of humoral immunity. On the other hand, in certain local responses, and under certain conditions, catecholamines may actually boost regional immune responses, through induction of IL-1, tumor necrosis factor-.alpha., and primarily IL-8 prodn. Thus, the activation of SNS during an immune response might be aimed to localize the inflammatory response, through induction of neutrophil accumulation and stimulation of more specific **humoral immune responses**, although systemically it may suppress Th1 responses, and, thus protect the organism from the detrimental effects of proinflammatory cytokines and other products of activated macrophages. The above-mentioned immunomodulatory effects of catecholamines and the role of SNS are also discussed in the context of their clin. implication in certain infections, major injury and sepsis, autoimmunity, chronic pain and fatigue syndromes, and tumor growth. Finally, the pharmacol. manipulation of the sympathetic-immune interface is reviewed with focus on new therapeutic strategies using selective .alpha.2- and .beta.2-adrenoreceptor agonists and antagonists and inhibitors of phosphodiesterase type IV in the treatment of exptl. models of autoimmune diseases, fibromyalgia, and chronic fatigue syndrome.

REFERENCE COUNT: 445 THERE ARE 445 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:526195 CAPLUS

DOCUMENT NUMBER: 134:264770

TITLE: Safety and immunogenicity of adjuvanted and unadjuvanted subunit influenza vaccines administered intranasally to healthy adults

AUTHOR(S): Boyce, T. G.; Hsu, H. H.; Sannella, E. C.; Coleman-Dockery, S. D.; Baylis, E.; Zhu, Y.;

Barchfeld, G.; DiFrancesco, A.; Paranandi, M.; Culley,
B.; Neuzil, K. M.; Wright, P. F.
CORPORATE SOURCE: Dep. Pediatric Adolescent Med., Mayo Clinic, Mayo Med.
Sch., Rochester, MN, USA
SOURCE: Vaccine (2000), 19(2-3), 217-226
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Antigen-specific **mucosal immunity** is thought to be important for protection against influenza virus infection. Currently licensed parenteral influenza vaccines stimulate the prodn. of serum antibodies, but are poor inducers of **mucosal immunity**. The adjuvant MF59 has been shown to enhance the **humoral immune response** to parenteral influenza vaccine in humans and the mucosal immune response to intranasally-administered influenza vaccine in mice. We conducted an open-label safety study followed by an observer-blind, randomized trial comparing the immune response to intranasally-administered subunit influenza vaccine adjuvanted with MF59, unadjuvanted subunit influenza vaccine, and placebo. Adverse reactions did not occur significantly more frequently in vaccines than placebo recipients. Of 31 subjects receiving 2 doses of MF59-adjuvanted influenza vaccine, 19 (61%), 8 (26%), and 11 (35%) developed a mucosal IgA response to influenza A/H1N1, A/H3N2, and B, resp. The percentage of subjects with a serum antibody response was slightly lower. The immune responses to adjuvanted vaccine were not significantly different from those to unadjuvanted vaccine. Both vaccines gave more frequent responses than seen in placebo recipients, indicating the potential of intranasal inactivated vaccines to stimulate local IgA responses.
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:423192 CAPLUS
DOCUMENT NUMBER: 133:162791
TITLE: Gene gun-mediated DNA immunization primes development of **mucosal immunity** against bovine herpesvirus 1 in cattle
AUTHOR(S): Loehr, B. I.; Willson, P.; Babiuk, L. A.; Van Drunen Littel-Van den Hurk, S.
CORPORATE SOURCE: Veterinary Infectious Disease Organization, University of Saskatchewan, Saskatoon, SK, S7N 5E3, Can.
SOURCE: Journal of Virology (2000), 74(13), 6077-6086
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Vaccination by a mucosal route is an excellent approach to the control of mucosally acquired infections. Several reports on rodents suggest that DNA vaccines can be used to achieve **mucosal immunity** when applied to mucosal tissues. However, with the exception of one study

with pigs and another with horses, there is no information on mucosal DNA immunization of the natural host. In this study, the potential of inducing **mucosal immunity** in cattle by immunization with a DNA vaccine was demonstrated. Cattle were immunized with a plasmid encoding bovine herpesvirus 1 (BHV-1) glycoprotein B, which was delivered with a gene gun either intradermally or intravulvomucosally. Intravulvomucosal DNA immunization induced strong cellular immune responses and primed **humoral immune responses** . This was evident after BHV-1 challenge when high levels of both IgG and IgA were detected. Intradermal delivery resulted in lower levels of immunity than mucosal immunization. To det. whether the differences between the immune responses induced by intravulvomucosal and intradermal immunizations might be due to the efficacy of antigen presentation, the distributions of antigen and Langerhans cells in the skin and mucosa were compared. After intravulvomucosal delivery, antigen was expressed early and throughout the mucosa, but after intradermal administration, antigen expression occurred later and superficially in the skin. Furthermore, Langerhans cells were widely distributed in the mucosal epithelium but found primarily in the basal layers of the epidermis of the skin. Collectively, these observations may account for the stronger immune response induced by mucosal administration.

REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 12 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:407549 CAPLUS
DOCUMENT NUMBER: 134:41084
TITLE: Enhancement of common **mucosal immunity** in aged mice following their supplementation with various antioxidants
AUTHOR(S): Enioutina, Elena Y.; Visic, Dino M.; Daynes, Raymond A.
CORPORATE SOURCE: Department of Pathology, University of Utah, Salt Lake City, UT, 84132, USA
SOURCE: Vaccine (2000), 18(22), 2381-2393
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Common mucosal immune responses were depressed in aged mice that were orally immunized with Haemophilus influenzae type b oligosaccharide conjugated to Diphtheria CRM197 protein (Hib-DT) vaccine using cholera toxin as the mucosal adjuvant. Both common mucosal and systemic **humoral immune responses** were also depressed in aged mice that were s.c. immunized with vaccine formulations contg. Hib-DT plus 1.alpha.,25-dihydroxyvitamin D3 (1,25(OH)2D3). Dietary supplementation of aged mice with either the antioxidant vitamin E, or with known activators of the alpha isoform of the peroxisome proliferator activated receptor (PPAR-.alpha.) was capable of restoring their mucosal and systemic **humoral immune responses** to mature adult levels, by both the oral and s.c. routes of immunization. These data support a hypothesis that some aspects of immunosenescence are due to dysregulations in cellular functions, and are not due to any irreversible defects in cellular components of the immune system.

REFERENCE COUNT: 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:395176 CAPLUS
DOCUMENT NUMBER: 133:133988
TITLE: CCR6 mediates dendritic cell localization, lymphocyte homeostasis, and immune responses in mucosal tissue
AUTHOR(S): Cook, Donald N.; Prosser, Dina M.; Forster, Reinhold; Zhang, Jiwen; Kuklin, Nelly A.; Abbondanzo, Susan J.; Niu, Xiao-Da; Chen, Shu-Cheng; Manfra, Denise J.; Wiekowski, Maria T.; Sullivan, Lee M.; Smith, Sidney R.; Greenberg, Harry B.; Narula, Satwant K.; Lipp, Martin; Lira, Sergio A.
CORPORATE SOURCE: Department of Immunology, Schering-Plough Research Institute, Kenilworth, NJ, 07033, USA
SOURCE: Immunity (2000), 12(5), 495-503
CODEN: IUNIEH; ISSN: 1074-7613
PUBLISHER: Cell Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Chemokine-directed migration of leukocyte subsets may contribute to the qual. differences between systemic and **mucosal immunity** . Here, the authors demonstrate that in mice lacking the chemokine receptor CCR6, dendritic cells expressing CD11c and CD11b are absent from the subepithelial dome of Peyer's patches. These mice also have an impaired **humoral immune response** to orally administered antigen and to the enteropathic virus rotavirus. In addn., CCR6-/- mice have a 2-15-fold increase in cells of select T lymphocyte populations within the mucosa, including CD4+ and CD8+ .alpha..beta.TCR T cells. By contrast, systemic immune responses to s.c. antigens in CCR6-/- mice are normal. Thus, CCR6 is a mucosa-specific regulator of humoral immunity and lymphocyte homeostasis in the intestinal mucosa.
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:263217 CAPLUS
DOCUMENT NUMBER: 133:320778
TITLE: Whole gut lavage fluid analysis: a minimally invasive method for study of **mucosal immunity** and inflammation
AUTHOR(S): Ghosh, Subrata; Dahele, Anna; Drummond, Hazel E.; Hoque, Syed S.; Humphreys, Kenneth; Arnott, Ian D. R.
CORPORATE SOURCE: Department of Gastroenterology, Western General Hospital, Edinburgh, UK
SOURCE: Methods in Molecular Medicine (2000), 41(Celiac Disease), 257-277
CODEN: MMMEFN
PUBLISHER: Humana Press Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The use of whole gut lavage fluid (WGLF) to study **mucosal immunity** and inflammation is described in detail. Both gut protein loss in mucosal inflammation and local mucosal secretion of cytokines and antibodies can be detected and studied by WGLF anal. This technique can easily be combined with colonoscopy or barium enema, but an

experienced nurse is usually required to monitor the patient. The information obtained can be used to exclude active inflammation as a cause of symptom in complex cases of inflammatory bowel disease or to exclude a gastrointestinal cause of blood loss. Use of this technique has shown the dissocn. between systemic and mucosal **humoral immune responses** in celiac disease.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:198416 CAPLUS
DOCUMENT NUMBER: 130:350907
TITLE: Intranasal delivery of recombinant parovirus-like particles elicits cytotoxic T-cell and neutralizing antibody responses
AUTHOR(S): Sedlik, C.; Dridi, A.; Deriaud, E.; Saron, M. F.; Rueda, P.; Sarraseca, J.; Casal, J. I.; Leclerc, C.
CORPORATE SOURCE: Unite de Biologie des Regulations Immunitaires, Institut Pasteur, Paris, 75724, Fr.
SOURCE: Journal of Virology (1999), 73(4), 2739-2744
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We previously demonstrated that chimeric porcine parvovirus-like particles (PPV:VLP) carrying heterologous epitopes, when injected i.p. into mice without adjuvant, activate strong CD4+ and CD8+ T-cell responses specific for the foreign epitopes. In the present study, we investigated the immunogenicity of PPV:VLP carrying a CD8+ T-cell epitope from the lymphocytic choriomeningitis virus (LCMV) administered by mucosal routes. Mice immunized intranasally with recombinant PPV:VLP, in the absence of adjuvant, developed high levels of PPV-specific IgG and/or IgA in their serum, as well as in mucosal sites such as the bronchoalveolar and intestinal fluids. Antibodies in sera from mice immunized parenterally or intranasally with PPV:VLP were strongly neutralizing in vitro. Intranasal immunization with PPV:VLP carrying the LCMV CD8+ T-cell epitope also elicited a strong peptide-specific cytotoxic-T-cell (CTL) response. In contrast, mice orally immunized with recombinant PPV:VLP did not develop any antibody or CTL responses. We also showed that mice primed with PPV:VLP are still able to develop strong CTL responses after subsequent immunization with chimeric PPV:VLP carrying a foreign CD8+ T-cell epitope. These results highlight the attractive potential of PPV:VLP as a safe, nonreplicating antigen carrier to stimulate systemic and **mucosal immunity** after nasal administration.
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:100005 CAPLUS
DOCUMENT NUMBER: 130:295290

TITLE: Antibody-Independent Protective **Mucosal Immunity** to Gastric Helicobacter Infection in Mice
AUTHOR(S): Blanchard, Thomas G.; Czinn, Steven J.; Redline, Raymond W.; Sigmund, Norma; Harriman, Gregory; Nedrud, John G.
CORPORATE SOURCE: Institute of Pathology, Case Western Reserve University, Cleveland, OH, USA
SOURCE: Cellular Immunology (1999), 191(1), 74-80
CODEN: CLIMB8; ISSN: 0008-8749
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Helicobacter pylori infection of the gastric mucosa can result in gastritis and peptic ulcer disease. Although vaccination can induce protective immunity in animal models of Helicobacter infection, the mechanism(s) of protective immunity has not been fully elucidated. This study was designed to det. whether **humoral immune responses** are required for protective Helicobacter immunity. IgA-deficient or Ig-deficient mice were orally immunized against Helicobacter felis and then challenged with live H. felis. Both groups were protected at levels comparable to that of wild-type mice. Addnl., inflammation was equiv. in extent and character between wild-type and antibody-deficient mice. Therefore antibody-independent mechanisms of immunity can protect mice against gastric Helicobacter infection. (c) 1999 Academic Press.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:340230 CAPLUS
DOCUMENT NUMBER: 129:121367
TITLE: Lipidation as a novel approach to mucosal immunization
AUTHOR(S): Tam, J. P.; Mora, A. L.; Rao, C.
CORPORATE SOURCE: Department of Microbiology and Immunology, Vanderbilt University, Nashville, TN, USA
SOURCE: Developments in Biological Standardization (1998), 92(Modulation of the Immune Response to Vaccine Antigens), 109-116
CODEN: DVBSA3; ISSN: 0301-5149
PUBLISHER: S. Karger AG
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors describe the design and development of a novel peptide-based approach for mucosal immunization. The design contains an amplified peptide chain as multiple antigen peptide (MAP) with a cluster of lipids. Such a design would confer on lipidated MAP the ability to self-assemble in water, mimicking enveloped viral particles. The importance of lipidation for mucosal immunization was confirmed by oral immunization with lipidated MAP in phosphate-buffered saline (PBS), which induced mucosal and systemic immune responses at local and distant sites, including sera and vaginal IgG as well as secretory IgA in saliva, vaginal secretions and fecal matter. T- cell proliferative responses were found in spleen, Peyer's patches and genital lymph nodes. In addn., significant

splenic cytotoxic T-cell responses were also obsd. No significant immune responses were obsd. with non-lipidated MAPs by oral delivery in PBS. Furthermore, these responses were selectively enhanced by different regimens, systemic priming and microparticle delivery. These results demonstrate the effectiveness of lipidated MAP for mucosal immunization to evoke both systemic and mucosal immune responses without the use of carrier or extraneous adjuvant.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:89674 CAPLUS
DOCUMENT NUMBER: 128:132318
TITLE: Sensitized liposomes as an antigen delivery system for the stimulation of **mucosal immunity**
AUTHOR(S): Velez, Carlos N.; Tonkonogy, Susan L.; Lichtman, Steven N.; Cho, Moo J.
CORPORATE SOURCE: Div. Pharmaceutics, School Pharmacy, Univ. North Carolina, Chapel Hill, NC, 27599, USA
SOURCE: Journal of Drug Targeting (1997), 5(1), 15-24
CODEN: JDTAEH; ISSN: 1061-186X
PUBLISHER: Harwood Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This study was designed to exploit the ability of Peyer's patch M cells to recognize antigen-antibody complexes in the targeted delivery of a model antigen for the induction of **mucosal immunity**. Sensitized liposomes consisted of an entrapped model antigen, ovalbumin (OVA), and coated with unrelated antigen-antibody complexes. Sensitized liposomes were administered intrajejunally to mice either with or without monophosphoryl lipid A (MLA). **Humoral immune responses** were monitored in saliva, feces, serum, and bile. Mice which received sensitized liposomes showed up to 4-fold amts. of specific IgA in saliva, feces, and bile compared to controls. Transient increases in anti-OVA IgA and IgG were obsd. in serum. Formulations including MLA generated pos. anti-OVA IgG responses in both serum and bile. In sep. expts., cell proliferation studies were performed with Peyer's patch lymphocytes harvested from mice immunized with OVA in either std. or sensitized liposomes. Lymphocytes from test mice receiving only sensitized liposomes proliferated in the presence of OVA, but not an unrelated antigen. Taken together, these results support the potential application of antigen-antibody complexes in the stimulation of mucosal immune responses and that MLA may play an important role in overcoming OVA tolerogenicity.

L6 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:465187 CAPLUS
DOCUMENT NUMBER: 127:189606
TITLE: Enhanced mucosal and systemic immune responses to intestinal reovirus infection in .beta.2-microglobulin-deficient mice
AUTHOR(S): Major, Amy S.; Cuff, Christopher F.
CORPORATE SOURCE: Dep. Microbiol. Immunol., Robert C. Byrd Health Sci.

Cent., West Virginia Univ., Morgantown, WV, 26506, USA
SOURCE: Journal of Virology (1997), 71(8), 5782-5789
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Enteric infection of mice with respiratory enteric orphan virus (reovirus) type 1, strain Lang elicits both humoral and cellular immune responses. To investigate the role of CD8+, .alpha./.beta. T-cell receptor (TCR)+ T cells in **mucosal immunity** to an enteric pathogen, we examd. immune responses and viral clearance following enteric reovirus infection in C57BL/6, B6129F2, and .beta.2-microglobulin-deficient (.beta.2m-/-) mice. Anal. of Peyer's patch and lamina propria culture supernatants revealed a two- to threefold increase in levels of reovirus-specific IgA in .beta.2m-/- mice compared to normal controls. These data corresponded to a similar increase in the frequency of virus-specific IgA-producing cells in Peyer's patches and lamina propria and an increase in IgG-producing cells in spleens from .beta.2m-/- mice compared to controls. These increased **humoral immune responses** were not due to a difference in B-cell populations because cell counts and flow cytometric analyses showed that .beta.2m-/- and control mice had similar nos. and percentages of B cells in mucosal and systemic tissues. Anal. of cytokine message by reverse transcriptase-PCR 5 and 10 days after infection revealed no difference in message level for transforming growth factor beta, gamma interferon, interleukin-4, interleukin-5, or interleukin-6 for all mouse strains. Virus tissue titers detd. by plaque assay at 5 and 10 days after infection demonstrated that .beta.2m-/- mice cleared reovirus from the small intestines with the same efficiency as control mice. Collectively, these data suggest that CD8+, .alpha./.beta. TCR+ T cells may regulate mucosal and systemic **humoral immune responses** to oral infection with reovirus.

L6 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:215733 CAPLUS
DOCUMENT NUMBER: 124:258190
TITLE: In vivo treatment with anti-interleukin-13 antibodies significantly reduces the **humoral immune response** against an oral immunogen in mice
AUTHOR(S): Bost, K. L.; Holton, R. H.; Cain, T. Kincy; Clements, J. D.
CORPORATE SOURCE: Med. Cent., Tulane Univ., New Orleans, LA, USA
SOURCE: Immunology (1996), 87(4), 633-41
CODEN: IMMUAM; ISSN: 0019-2805
PUBLISHER: Blackwell
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Interleukin-13 (IL-13) is a cytokine that significantly enhances the proliferation and differentiation of B lymphocytes. We therefore evaluated its role in the formation of a **humoral immune response** in vivo. Upon oral immunization with the B subunit of Escherichia coli heat-labile enterotoxin (LT-B), rapid up-regulation of IL-13 mRNA expression in the mesenteric lymph nodes of LT-B intubated mice occurred. This result suggested that IL-13 might be involved in the formation of a mucosal antibody response against LT-B if this cytokine was

in fact secreted. To test this possibility, the coding region for murine IL-13 was cloned into the pFLAG-1 expression vector. Recombinant murine IL-13 was purified from bacterial lysates and used as an immunogen to produce polyclonal anti-IL-13 antibodies. Groups of BALB/c mice treated in vivo with anti-IL-13 antibody 2 days before and on the day of oral immunization with LT-B had significantly reduced intestinal IgA and serum IgG and IgA anti-LT-B antibody responses when compared to mice treated with control antibody. Furthermore, groups of mice primed with LT-B and then treated with anti-IL-13 antibody prior to oral immunization with a second dose of LT-B also had significantly reduced intestinal IgA and serum IgG and IgA anti-LT-B antibody titers compared to control. In vitro LT-B restimulation expts. using splenic mononuclear leukocytes isolated from LT-B primed mice treated with anti-IL-13 antibody demonstrated decreased expression of IL-4 and IL-13 mRNA and decreased IL-4 secretion when compared to controls. Together these results demonstrate an important role for IL-13 in the formation of a **humoral immune response** at mucosal surfaces.

L6 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:32066 CAPLUS
DOCUMENT NUMBER: 124:114803
TITLE: Specific secretory immune responses in the female genital tract following intranasal immunization with a recombinant adenovirus expressing glycoprotein B of herpes simplex virus
AUTHOR(S): Gallichan, W. Scott; Rosenthal, Kenneth L.
CORPORATE SOURCE: Health Sciences Centre, McMaster University, Hamilton, ON, Can.
SOURCE: Vaccine (1995), 13(16), 1589-95
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Previously, the authors demonstrated that intranasal (i.n.) but not i.p. immunization with a recombinant adenovirus vector expressing glycoprotein B (gB) of herpes simplex virus type 1 (HSV-1) induced mucosal immune responses and conveyed long-term protection to mice against an i.n. challenge with heterologous HSV-2. The authors now show that i.n. immunization of female mice with this same vector, AdgB8, provides secretory and serum-derived **humoral immune responses** in the genital tract. Intranasal immunization induced anti-HSVgB IgA and IgG in vaginal washes of mice, whereas i.p. immunization only induced IgG, which appeared to be serum-derived. Interestingly, intravaginal (ivag) immunization with AdgB8 resulted in little or no anti-HSVgB IgA and only low levels of specific IgG in vaginal washes. All three routes of inoculation induced gB-specific serum IgG and IgA; however, i.n. immunized mice demonstrated the highest level of serum anti-HSVgB IgA. Addnl., ivag boosting with AdgB8 did not significantly alter the serum or vaginal wash antibody responses in i.n. or i.p. immunized mice. The IgG to IgA ratios of gB-specific and total antibody titers in the serum and vaginal washes of i.n. immunized mice indicated that the IgA in the vaginal washes was likely to be secretory. Furthermore, the titers of anti-HSVgB IgA relative to total IgA were higher in vaginal washes than sera, suggesting that the gB-specific vaginal wash IgA present in i.n. immunized mice was locally produced.

L6 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:912520 CAPLUS
DOCUMENT NUMBER: 124:6669
TITLE: Development of mucosal **humoral immune responses** in germ-free (GF) mice
AUTHOR(S): Khroff, Khushroo E.; Cebra, John J.
CORPORATE SOURCE: Departmetn Biology, University Pennsylvania, Philadelphia, PA, 19104-6018, USA
SOURCE: Advances in Experimental Medicine and Biology (1995), 371A(Advances in Mucosal Immunology, Part A), 441-6
CODEN: AEMBAP; ISSN: 0065-2598
PUBLISHER: Plenum
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors sought to derive antigen-specific germinal center reactions in Peyer patches leading to IgA commitment and memory B-cells and secretory plasma cells. Also, the kinetics of the antibody response were detd.

L6 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:871747 CAPLUS
DOCUMENT NUMBER: 123:253999
TITLE: Mucosal model of immunization against human immunodeficiency virus type 1 with a chimeric influenza virus
AUTHOR(S): Muster, Thomas; Ferko, Boris; Klima, Annelies; Purtscher, Martin; Trkola, Alexandra; Schulz, Petra; Grassauer, Andreas; Engelhardt, Othmar G.; Garcia-Sastre, Adolfo; et al.
CORPORATE SOURCE: Inst. Angewandte Mikrobiol., Univ. Bodenkultur, Vienna, A-1190, Austria
SOURCE: Journal of Virology (1995), 69(11), 6678-86
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Previously, we constructed a chimeric influenza virus that expresses the highly conserved amino acid sequence ELDKWA of gp41 of human immunodeficiency virus type 1 (HIV-1). Antisera elicited in mice by infection with this chimeric virus showed neutralizing activity against distantly related HIV-1 isolates (T. Muster, et al., 1994). In the present study, we demonstrated that intranasal immunizations with this chimeric virus are also able to induce a **humoral immune response** at the mucosal level. The immunized mice had ELDKWA-specific IgA in respiratory, intestinal, and vaginal secretions. Sustained levels of these secretory IgA were detectable for more than 1 yr after immunization. The results show that influenza virus can be used to efficiently induce secretory antibodies against antigens from foreign pathogens. Since long-lasting **mucosal immunity** in the genital and intestinal tracts might be essential for protective immunity against HIV-1, influenza virus appears to be a promising vector for HIV-1-derived immunogens.

L6 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:256765 CAPLUS
DOCUMENT NUMBER: 122:29553
TITLE: Systemic and **mucosal immunity**

induced by BCG vector expressing outer-surface protein
A of Borrelia burgdorferi
AUTHOR(S): Langermann, Solomon; Palaszynski, Susan; Sadziene, Ariadna; Stover, C. Kendall; Koenig, Scott
CORPORATE SOURCE: MedImmune Inc., Gaithersburg, MD, 20878, USA
SOURCE: Nature (London) (1994), 372(6506), 552-5
CODEN: NATUAS; ISSN: 0028-0836
PUBLISHER: Macmillan Magazines
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The bacillus Calmette-Guerin (BCG) is a live attenuated strain of Mycobacterium bovis which offers potential advantages as a vector for mucosal delivery of antigens. Recombinant BCG elicits protective **humoral immune responses** to a variety of antigens. Furthermore, BCG binds specifically to microfold cells present in the epithelium overlying lymphoid follicles throughout the mucosal immune system. Here the authors show that a single intranasal vaccination with recombinant BCG expressing the outer surface protein A antigen from B. burgdorferi results in a prolonged (>1 yr) protective systemic IgG response and a highly sustained secretory IgA response which is disseminated throughout the mucosal immune system. Furthermore, intranasal immunization induces marked, organized lymphocyte accumulation in the proximal nasopharyngeal lymphoid tissue as well as at distal mucosal sites; the appearance and persistence of lymphoid aggregates correlates with the secretory immune responses. The intranasal immunization with recombinant BCG is a powerful method for inducing long-lasting secretory and systemic immune responses.

L6 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:189142 CAPLUS
DOCUMENT NUMBER: 120:189142
TITLE: Oral immunization with recombinant BCG induces cellular and **humoral immune responses** against the foreign antigen
AUTHOR(S): Lagranderie, M.; Murray, A.; Gicquel, B.; Leclerc, C.; Gheorghiu, M.
CORPORATE SOURCE: Lab. du BCG, Inst., Pasteur de Paris, Paris, 75724, Fr.
SOURCE: Vaccine (1993), 11(13), 1283-90
CODEN: VACCDE; ISSN: 0264-410X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB It has been shown recently that BCG can be used as a live recombinant vaccine to stimulate immune responses. Proliferative or cytotoxic T-cell responses against several viral proteins such as HIV Gag, Env or Nef were obtained after parenteral immunization with BCG expressing these proteins.
Antibody responses were also obtained after immunization of mice with recombinant BCG strain which expressed lac Z under the control of a promoter sequence isolated from Mycobacterium paratuberculosis. The authors have used this recombinant vaccine in guinea-pigs to investigate the influence of various routes of immunization on the immunogenicity of a foreign antigen expressed by recombinant BCG. Guinea-pigs were immunized by oral, respiratory or intradermal routes and proliferative responses, delayed-type hypersensitivity and antibody responses specific for .beta.-galactosidase were followed for 16 wk. Results demonstrated that

humoral and cellular immune responses specific for .beta.-galactosidase can be produced in all groups of guinea-pigs. However, the respiratory and esp. the oral route of administration induced higher local and systemic immune responses than the intradermal route of immunization. Moreover, the oral immunization of mice with this recombinant BCG induced IgA responses which could be detected in both sera and intestinal secretions. Therefore, this study demonstrates for the first time that oral immunization with recombinant BCG can induce strong cellular and **humoral immune responses**.

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         92362 INJECTIONS
        463466 INJECTION
                 (INJECTION OR INJECTIONS)
L9           0 QAUDRICEPS (W) INJECTION

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